



# ***DARPA*Tech**

## ***2002 Symposium***

*Transforming*  
***Fantasy***



**Sam B. Wilson**  
Program Manager



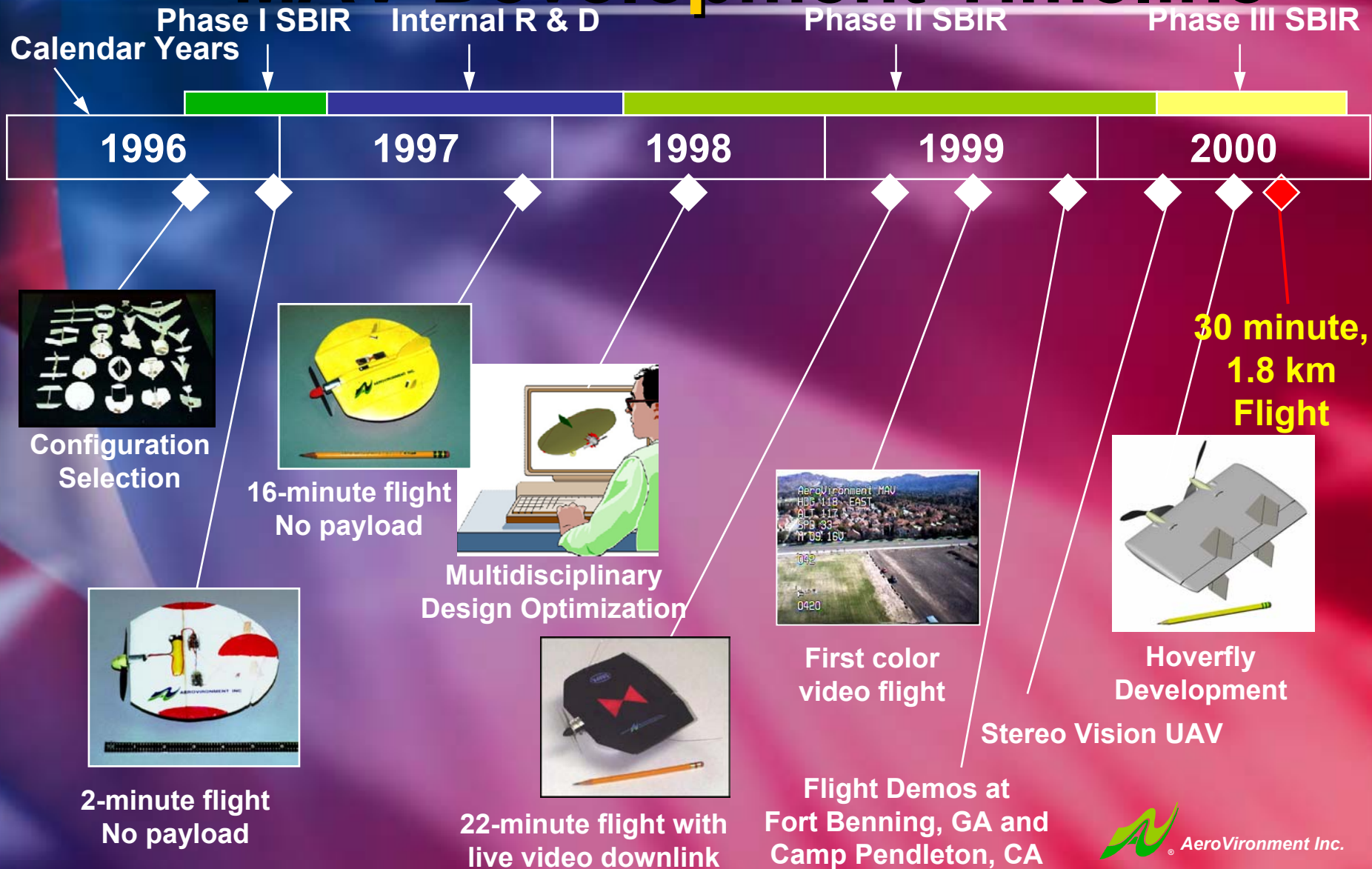
# **SBIR Success Story for DARPA Tech 2002 AeroVironment Inc. Program Overview**

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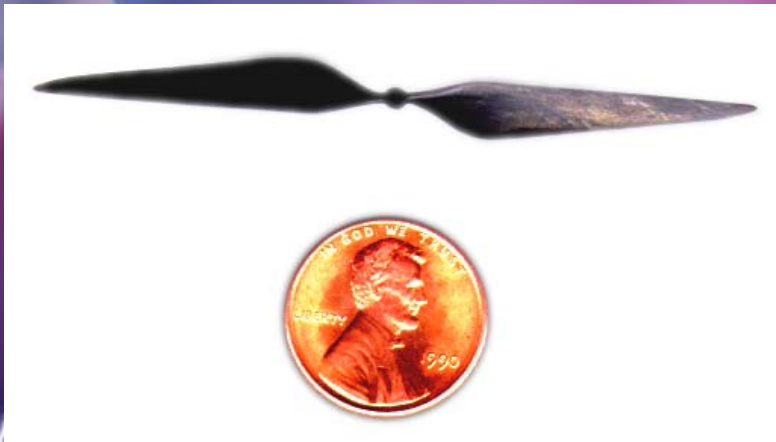
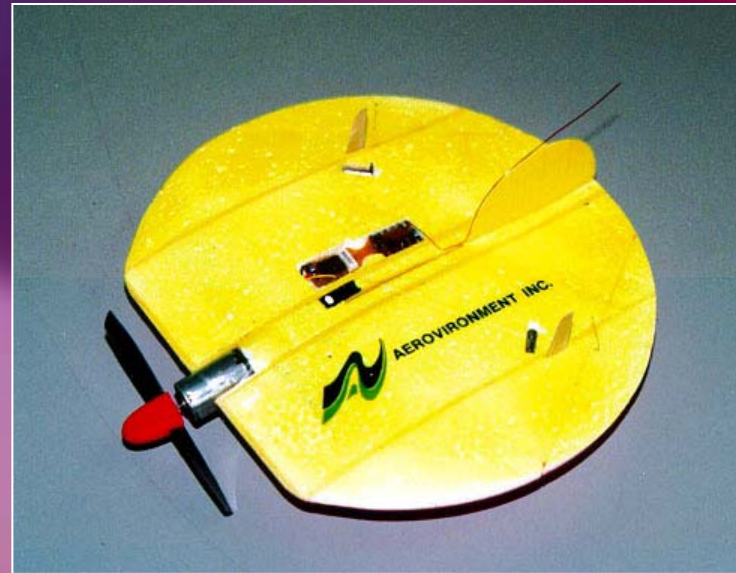


# MAV Development Timeline



# Fixed Wing MAV

AeroVironment's *Black Widow*:



# AeroVironment – Black Widow





# 30-Minute Black Widow Flight



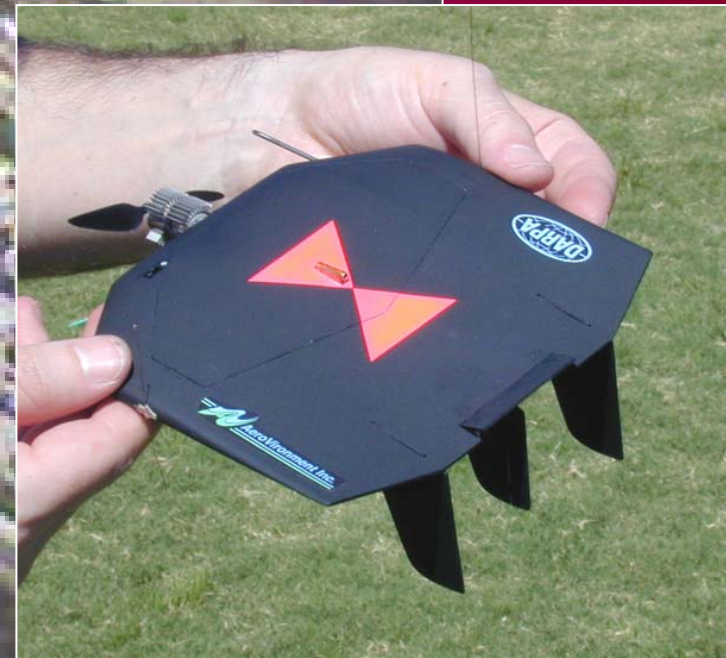
AeroVironment Inc.

AeroVironment MAV  
HDG 149 SOUTH  
ALT 769  
SPD 33  
09.53U

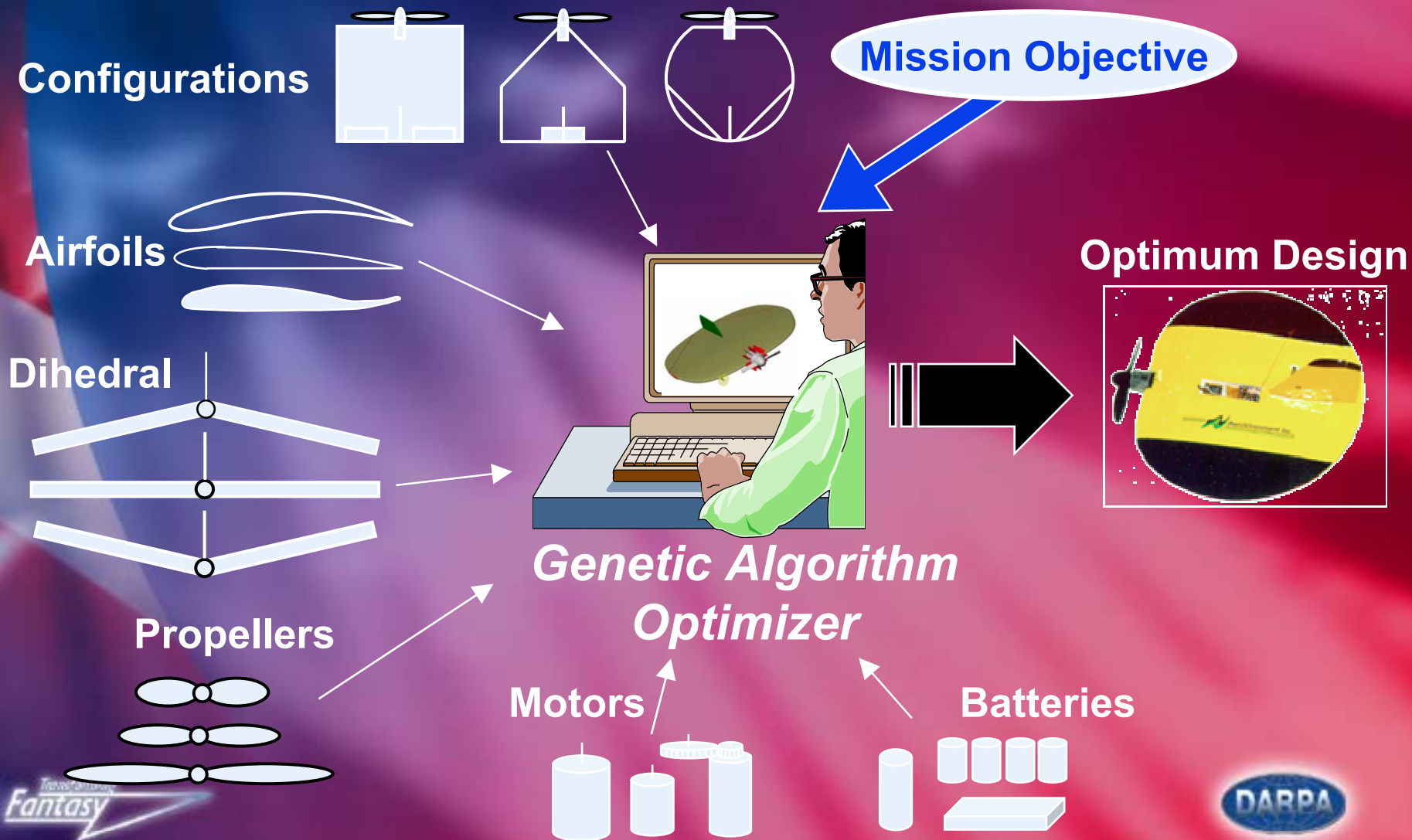
042

+

1.987V -69dBm

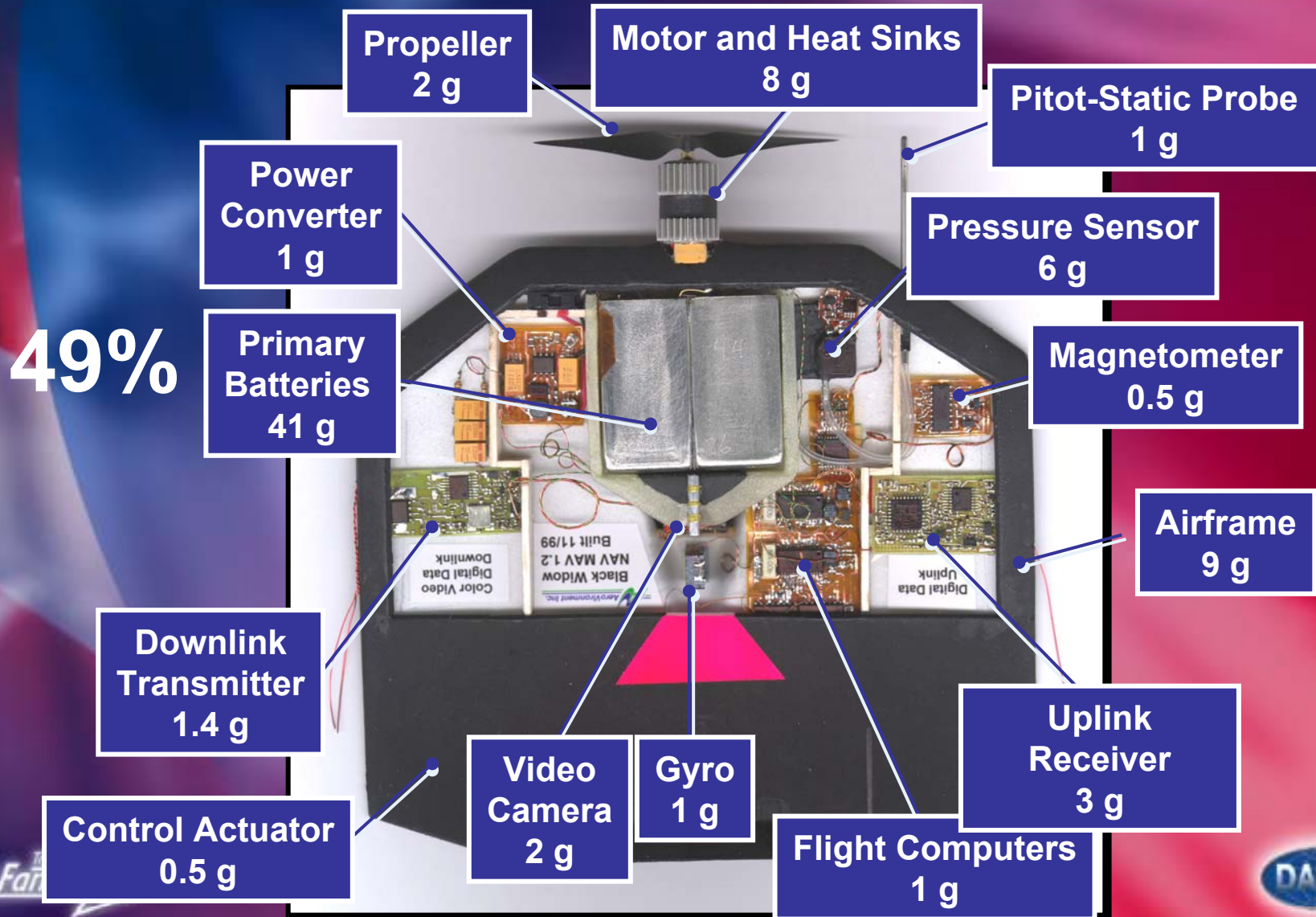


# MAV Design Optimization





# AeroVironment MAV Anatomy



# Universal MAV GCU

Operator's  
Console



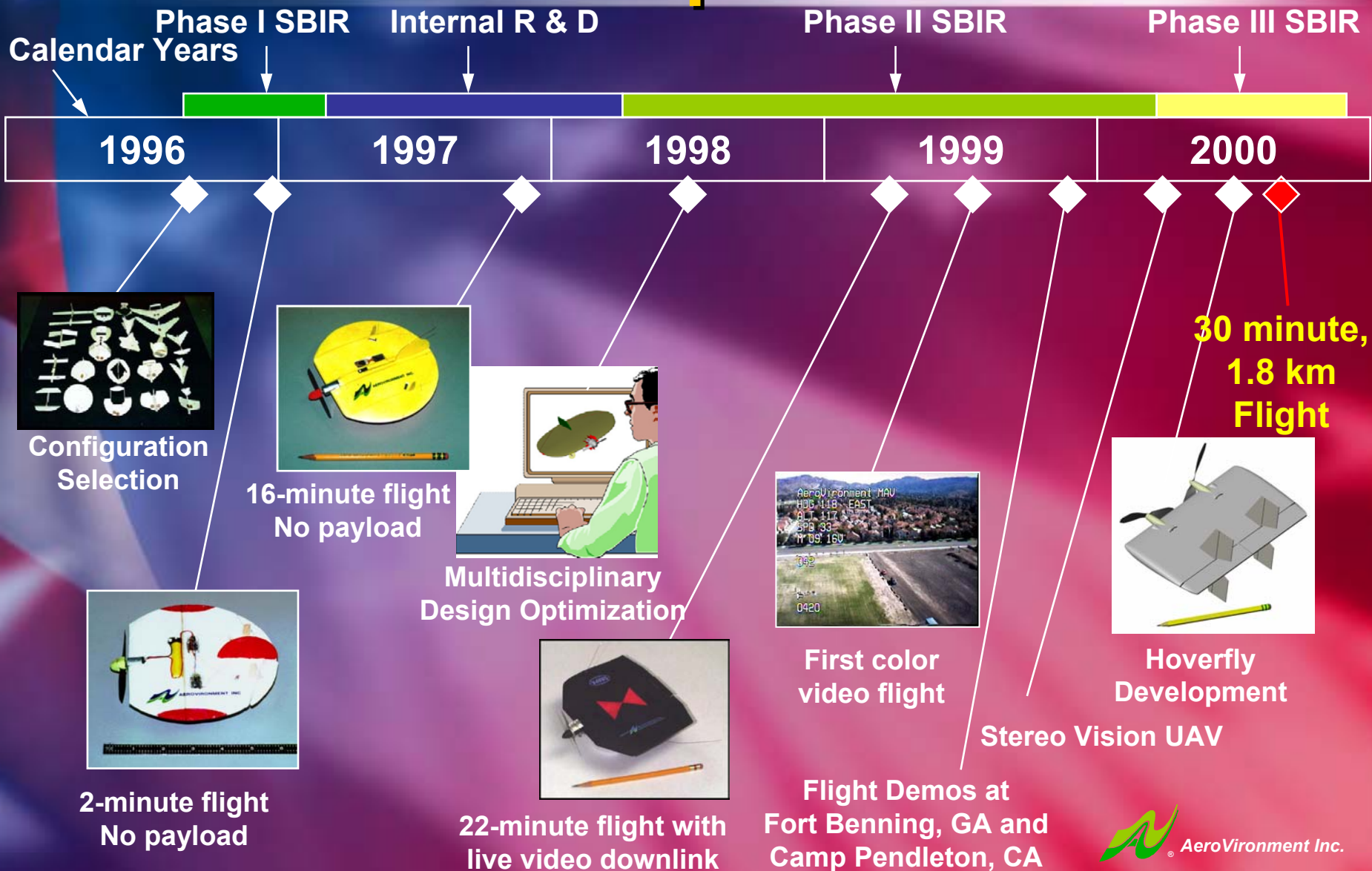
# Universal MAV GCU

Magnetic  
Heading  
Altitude  
Airspeed  
MAV Battery  
Voltage  
Status Byte  
“Heartbeat”  
Debugging  
Information

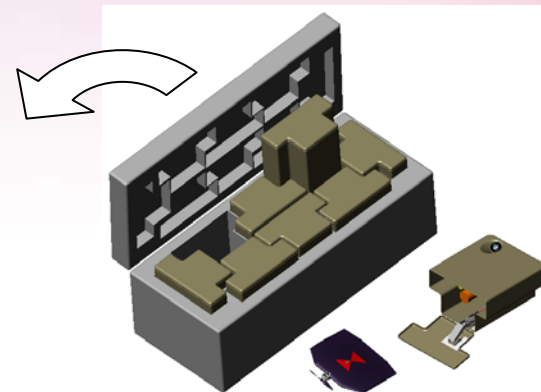
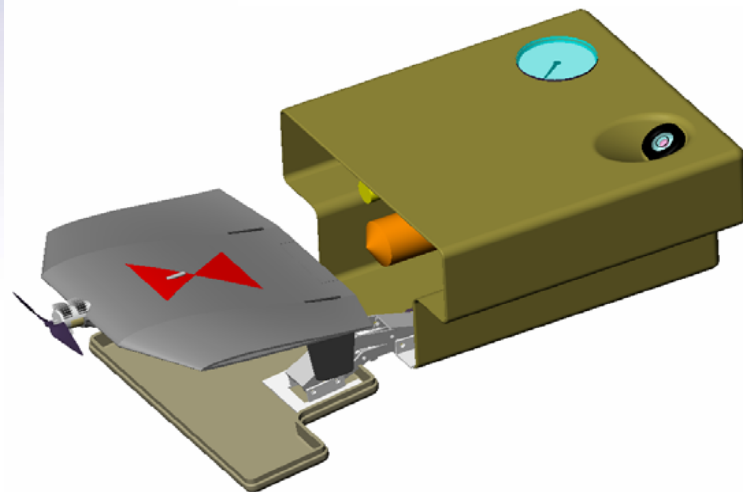
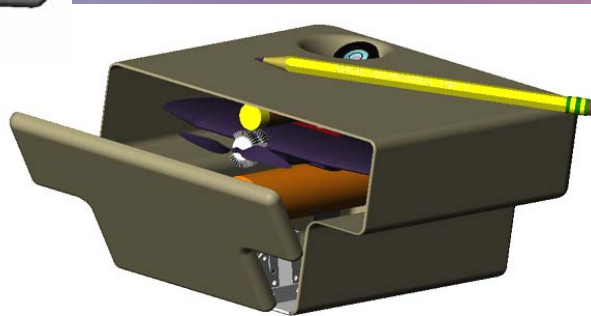
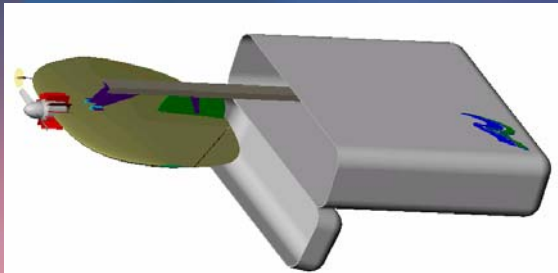




# MAV Development Timeline



# MAV Cassette Launcher



# MAV Video Relay with Pointer

(Potential Uses



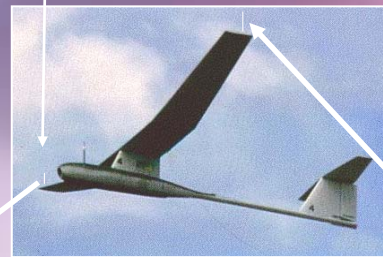
(Unique Features



**Black Widow  
Ground Station**

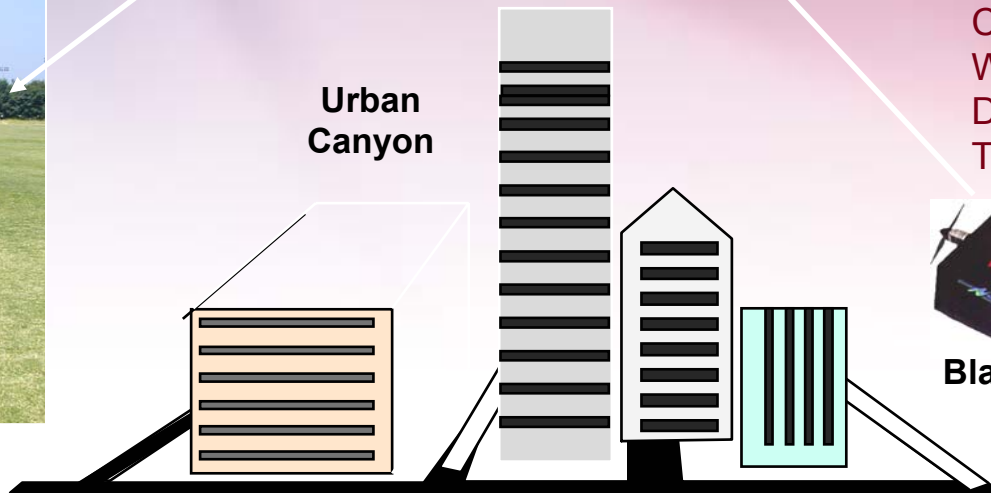
Transmit  
Antenna

Receive  
Antenna



**POINTER UAV**

Urban  
Canyon



Black Widow  
Carries  
Color Video Camera  
With 2.4 GHz  
Downlink  
Transmitter



**Black Widow MAV**



# MG Newbold with MAV



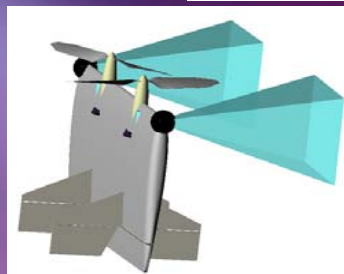
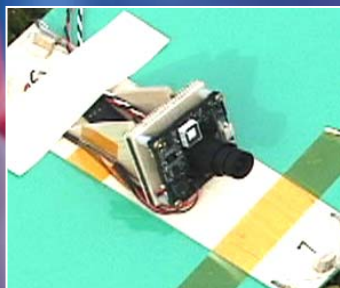
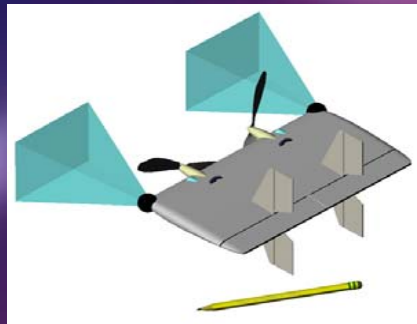
Distribution Statement A: Approved for public release; distribution is unlimited.



# LtGen Knutson with Portable UAV



# Stereo Vision UAV



Left View

Right View



Composite  
Stereo View

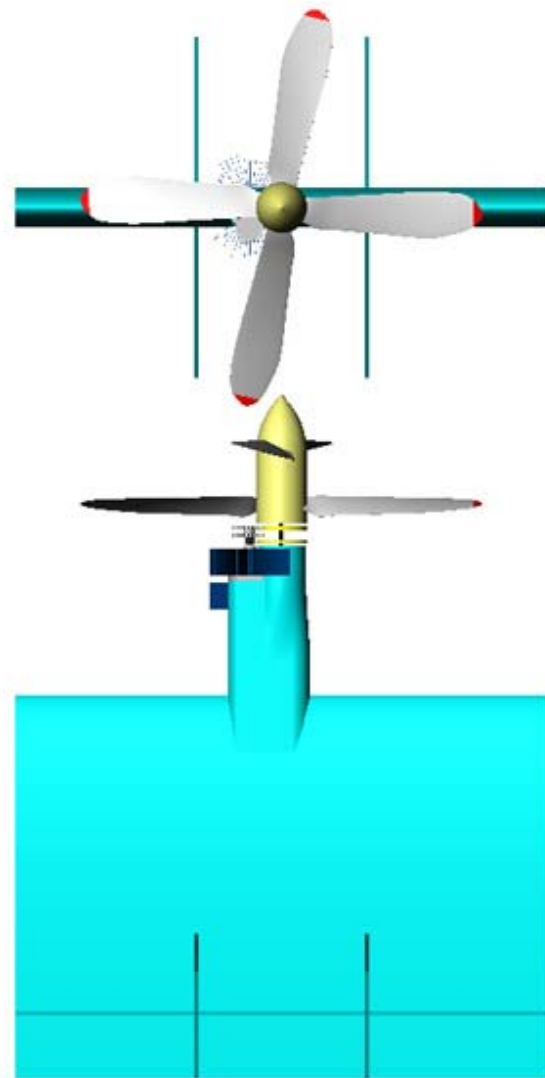
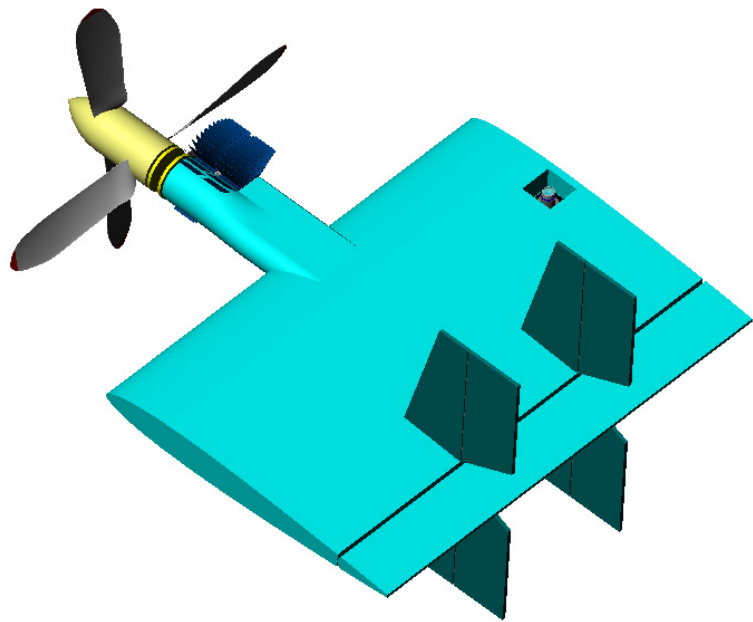


AeroVironment Inc.





# Hoverfly VTOL MAV





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